IN THE CLAIMS

Please replace original claims 1-7 with new claim 8 as attached hereto as Exhibit B.

Please add the Abstract, attached hereto as Exhibit C.

REMARKS

By this Preliminary Amendment, a cross-reference to related applications has been inserted in page 1. Original page 1 is being replaced with new pages 1 and 1a. Replaced original claims 1-7 with new claim 8, and an Abstract is being provided. No new matter has been introduced. Entry of this amendment is respectfully requested.

Respectfully submitted,
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EXHIBIT A

NEW PAGES 1 AND 1A

P 1030169 WO
09/10/01

PLANETARY TRANSMISSION

The invention concerns a planetary transmission according to the generic portion of the single patent claim.

This type of transmission is known, in relation to the alternative in which the internal gears of the first and second stages are rigidly connected with the planet carrier of the third stage, from DE 198 40 968 A1, and, in relation to the alternative in which the internal gears of the first and second stages are rigidly connected with the transmission housing, from GB 627,004 A.

In relation to the previously cited prior art which forms the generic portion, the invention concerns itself with the problem of being able to achieve a high transmission ratio, with large torques and high transmission stiffness at the same time, having the smallest possible overall volume. At the same time, the transmission should be economically producible with simple means and should ensure a durable, low-wear operation with low-play transmission.

This object is achieved according to the invention by a planetary transmission according to the generic portion with the characterizing features of the single patent claim in a surprisingly good and simple way.

An essential core of the invention is the use of internal gears each having a number of teeth, typical for various reasons in planetary transmissions, of z = 108 and the realization of a transmission ratio of i = 5.5, not typical in planetary transmissions, in the third and therefore last driven stage with the simultaneous use of four planet wheels. This type of non-whole number transmission ratio is not typical, because typically in transmission technology, only whole number transmission ratios are realized for other normalization reasons.

If four planet wheels and a number of teeth in the internal gears of z = 108 are used, a maximum torque transmission can surprisingly be achieved with a transmission ratio of precisely i = 5.5.

The whole number transmission typical in transmissions is achieved overall by the combination of the transmission ratios of i = 4 in the second transmission stage and i = 5.5 in the third transmission stage.

In a speed-reducing transmission, the driven transmission stage is loaded with the highest torque, so that it is important that precisely this last stage be implemented for optimum reception of a high torque. Through the design indicated according to the invention of the second and third transmission stages, planetary transmissions having a small overall volume and, simultaneously, high torques to be transmitted are created in a surprisingly good way, with, additionally, extremely high transmission stiffness.

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EXHIBIT B

NEW CLAIM 8

NEW CLAIM

Sub B5 A2

8. Three stage, speed-reducing planetary transmission having, in each stage, a driven sun wheel rolling in an internal gear and interacting with a planet wheel mounted in a planet carrier, in which the sun wheels of the second and third stages are each driven by the planet carrier of the preceding stage, and a fixed transmission housing, in which at least the internal gear of the third stage is rigidly connected with the transmission housing and the internal gears of the first and second stages are each rigidly connected either with the planet carrier of the third stage or the transmission housing, and in which, furthermore, the planet carriers of the second and third stages are each provided with four planet wheels across their width, characterized by the features

- the internal gears (6, 12, 13) each have a number of teeth z = 108 in all three stages,

- the transmission ratios are i = 4 for the second stage and i = 5.5 for the third stage.

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Add A3 7

EXHIBIT C

ABSTRACT